SITE RESPONSE SECTION (SRS) MAP GUIDANCE

The General Guidance below should be followed for all maps or figures submitted to the SRS. The map specific guidance applies as necessary based on the scale of the project, site specific conditions, and level of documentation requested by the Site Response Section.

General Guidance:

All submitted maps should include north arrow; date; graphic scalebar; township, range, section, and quarter section; and latitude/longitude expressed in decimal degrees on the WGS84 datum.

If the map uses background images (i.e. USGS quads, aerial photographs, etc.) the names, dates, and sources should be identified.

If the map includes a numbered coordinate grid, the coordinate system and datum of the grid should be identified.

The method used to determine all coordinates plotted on the map should be identified (such as type of survey conducted or interpolation method used).

All maps and map labels should be legible and at a scale appropriate to easily discern displayed information (map sizes typically submitted are 8½" x11", 11"x17", and 24"x36").

All maps should have an appropriate background reference layer (i.e. USGS Topo, aerial photograph, site/facility feature schematic, etc.) to provide for easy visual reference location.

Map Specific Guidance:

Site/Facility Location Map
Map based on a USGS 7.5' Quadrangle depicting the site/facility location. Surface water bodies and topography should be identified.

Site/Facility Plan View Map(s)
Map depicting the entire site/facility, including property boundaries, buildings, above or below ground tanks/utilities, surrounding, adjacent and/or impacted properties, potential source areas, potentially impacted receptors, and other pertinent features (CECRA Facility Boundary if a CECRA facility).

Sample Location Map(s)
Map depicting locations of monitoring wells, soil borings, soil gas and groundwater survey probe locations, surface soil sampling locations, etc. Prepare separate maps for each different type of sample location (i.e. groundwater sample, soil sample, etc.).

One sample location map should include (as a base layer) the highest quality or most current color orthophoto with georeferenced Sanborn map information and/or any other site/facility historic blueprint/map information overlain with all labeled sample locations to assist in the identification of historic sources and operations. This map is typically a 24"x26" map to allow for greater site detail.

Potentiometric Surface Map(s)
Map depicting the potentiometric groundwater surface. Control points should be labeled. Data such as static water level elevations at control points should be depicted on the map. Arrows should be included on the map depicting groundwater flow direction(s). Elevation should be expressed as feet above Mean Sea Level.

Geologic Cross Sections
Include Geologic Cross Sections that show site stratigraphy through full depth of potentially impacted water-bearing units, including underlying confining layer. Prepare a minimum of three cross-sections per

site (i.e. one parallel to groundwater flow direction and two perpendicular to flow direction and/or skewed to align with actual well/boring sample locations). Indicate contaminant location, monitoring wells depicting their screened intervals, and subsurface conduits/piping, etc., depicting the subsurface of the property. The cross sections should be oriented longitudinally and transversely with respect to the orientation of soil and/or groundwater contaminant plumes. The potentiometric surface should be depicted on the cross section. A plan view map showing the location of all cross sections should be included as a separate figure.

Soil Contamination
Isoline map depicting soil analytical data. It may be necessary to prepare a separate map for each contaminant, suite of contaminants, and total contamination. Include at least three labeled isolines for each contaminant (one identifying the area of sampling method detection limit exceedence, one identifying each applicable standard and/or screening level (i.e. RBSL, RSL*) exceedence, and one identifying areas of increased concentrations). The map should include contaminant concentration unit labels.

Groundwater Contamination Isoconcentration Map(s)
Isoline map depicting the extent and degree of groundwater contamination. It may be necessary to prepare an isoline map for each contaminant, suite of contaminants, and total contamination. Include at least three labeled isolines for each contaminant (one identifying the required reporting value identified in DEQ-7, one identifying each applicable standard and/or screening level (i.e. MCL, DEQ-7, RBSL*) exceedence, and one identifying areas of increased concentrations). The map should include contaminant concentration unit labels.

Separate Phase Product Isoline Map(s)
If separate phase product is encountered, a map depicting product extent and thickness should be provided. Include at least three labeled isolines for each separate phase product (one identifying the edge of measurable product thickness; then as many isolines as necessary to demonstrate the range of thickness encompassed by the plume). The map should include product thickness labels.

Site/Facility Contaminant Affected Area Map
Map of all identified contaminant isoline areas (for all media in both the surface and subsurface) color coded to distinguish different contaminant areas/media. All sample locations should be labeled and included, contaminant source locations should be identified as well as other pertinent features (CECRA facility Boundary if a CECRA facility). This map is typically a 24”x36” map to allow for greater site detail.

* DEQ-7 - Montana Numeric Water Quality Standards (formerly WQB-7)
MCL - EPA Maximum Contaminant Levels
RSL - EPA Regional Screening Level
RBSL - Montana Tier 1 Risk Based Screening Levels
VCRA - Voluntary Cleanup and Redevelopment Act